Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

application:This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

Claim 1 (currently amended): A system for demonstrating signal cascades that occur in

certain cells when certain stimuli are introduced, comprising:

(a)   a dynamic database comprising:

(i)   definitions relating to known cellular components, reactions and concepts;

(ii)   concepts adapted to inherit from other concepts ~~and capable of joining~~

~~other concepts~~;

(iii)   events;

(iv)   **signal transduction information** ~~attributes~~; and

(v)   attributes; and

(b)   an inference engine for generating signal cascades,

wherein the inference engine is linked to the dynamic database.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (previously presented): The system of claim 1, wherein said concepts contain

other concepts.

Claim 5 (previously presented): The system of claim 1, wherein said concepts exclude other concepts.

Claim 6 (canceled)

Claim 7 (previously presented): The system of claim 1, wherein said concepts are associated with said attributes.

Claim 8 (previously presented): The system of claim 1, wherein said attributes comprise indicia of size, shape, color, location of a graphic, time, or species.

Claim 9 (canceled)

Claim 10 (previously amended): The system of claim 1, wherein said dynamic database comprises pathology information.

Claim 11 (previously presented): The system of claim 1, wherein said dynamic database comprises information specific to chemical areas.

Claim 12 (original): The system of claim 11, wherein said information comprises signal transduction information on plant cellular environments or animal cellular environments.

Claim 13 (previously presented): The system of claim 1, wherein the dynamic database comprises data for binding constants, rate equations, reactant concentrations, primary sequences of functional sites in biomolecules or proteins, or efficacy of physical interactions with binding partners.

Claim 14 (new): The system of claim 1, wherein said concepts are capable of joining

other concepts.